

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/051474 A2

(51) International Patent Classification⁷: **A61M 27/00**

(21) International Application Number:
PCT/DK2004/000827

(22) International Filing Date:
26 November 2004 (26.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2003 01749 26 November 2003 (26.11.2003) DK
60/524,887 26 November 2003 (26.11.2003) US

(71) Applicant (for all designated States except US): **SINU SHUNT A/S** [DK/DK]; Naverland 2, DK-2600 Glostrup (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BØRGENSEN, Svend, Erik** [DK/DK]; Bakkedal 14, DK-2980 Kokkedal (DK).

(74) Agent: **HØIBERG A/S**; St. Kongensgade 59 A, DK-1264 Copenhagen K (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR SHUNTING TOXIC SUBSTANCES FROM A BRAIN VENTRICLE TO THE SINUS SYSTEM

(57) Abstract: The present invention is directed to methods for controlled and optimized removal of cerebrospinal fluid (CSF) from the CSF space of a patient. The methods are particularly intended for the treatment of Alzheimer's disease and other conditions which are caused by, or otherwise related to, the retention and/or accumulation of toxic substances in the CSF. One aspect of the present invention provides a method for shunting toxic substances present in a brain ventricle to the sinus system of an individual suffering from, or at risk of developing, a condition related to the retention and/or accumulation of toxic substances in the CSF, such as Alzheimer's disease. In addition to Alzheimer's disease, the present invention will be useful for treating other conditions resulting from the accumulation of toxic substances and resulting lesions in the patient's brain, such as Down's Syndrome, hereditary cerebral hemorrhage with amyloidosis of the Dutch-Type (HCHWA-D), epilepsy, narcolepsy, Parkinson's disease, polyneuropathies, multiple sclerosis, amyotrophic lateral sclerosis (ALS), myasthenia gravis, muscular dystrophy, dystrophy myotonic, other myotonic syndromes, polymyositis, dermatomyositis, brain tumors, Guillain-Barre-Syndrome, and the like.



WO 2005/051474 A2